Weekly Influenza Surveillance Report

Maryland Department of Health and Mental Hygiene | Infectious Disease and Environmental Health Administration
Office of Infectious Disease Epidemiology and Outbreak Response

SYNOPSIS

So far this influenza season (October 3, 2010, to January 15, 2011) clinical laboratories have reported 811 positive rapid test results. Of those 811, 715 (88%) have been type A and 96 (12%) have been type B. The State Laboratories Administration has reported 119 positive PCR tests for influenza. Of those, 53 (44.5%) have been for influenza type A (H1N1), 58 (48.7%) have been for influenza type A (H3), and 8 (6.7%) have been for influenza type B. Sentinel providers have reported 2,309 visits for influenza-like illness. Also this season, 214 hospitalizations associated with influenza have been reported to DHMH.

Based on these influenza activity observations, we have found influenza present in all of Maryland ("widespread") during week 2 of 2011, with types A (H1N1) and A (H3) sharing dominance; and the level of influenza activity remains elevated. All evidence is that the strains of influenza circulating in Maryland are a good match to the 2010-11 influenza vaccine.

INFLUENZA-LIKE ILLNESS SURVEILLANCE (ILINet)

During week 2, 11 sentinel providers reported 184 (4.3%) of 4,301 visits to their practices were for ILI. This is below the state baseline of 5.6%.

This same week last season, when influenza activity peaked late in October of 2009 and was on the decline by December, the proportion of visits for ILI was 3.2%.

For more information on the US Outpatient Influenza-like Illness Reporting Network (ILINet), please visit our website: http://dhmh.maryland.gov/fluwatch and click on "ILINet Sentinel Providers".

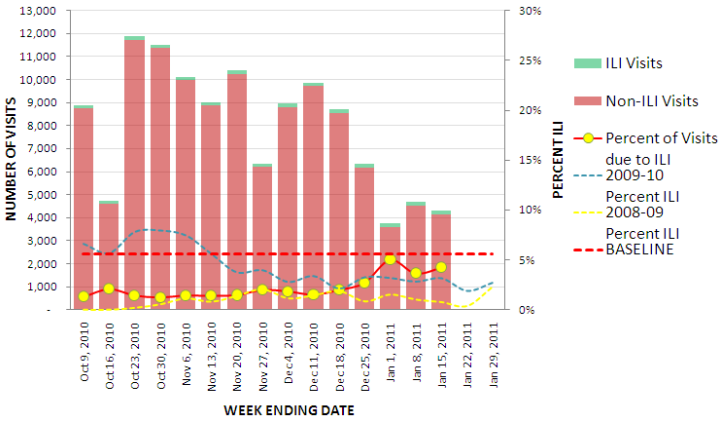


Figure 1. Number of visits and proportion of visits for ILI to ILINet sentinel providers, 2010-11 influenza season

CLINICAL LAB REPORTS OF RAPID FLU TESTING

During week 2, 20 clinical laboratories reported 320 (20.1%) of 1,592 rapid influenza tests as positive: 295 were positive for type A, and 26 were positive for type B influenza. This proportion of positive tests was higher than the proportion reported at this time last season, which was 2.3%.

While not as accurate as PCR tests, rapid influenza tests become more accurate as the flu season progresses and influenza is more prevalent in the community. As a result, rapid influenza tests and their results are good indicators of who was sick enough to be tested and who truly has the flu.

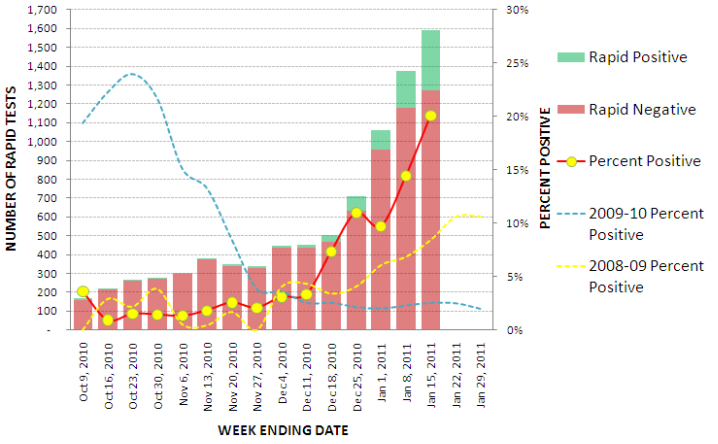


Figure 2. Number and result of rapid tests reported by clinical laboratories, 2010-11 influenza season

Type of Positives	Number (%)
Type A	715 (88%)
Type B	96 (12%)
Positive, but not typed	0
Total Positive	811 (100%)

Table 1. Number of positive rapid influenza tests, by type, reported by collaborating clinical laboratories 2010-11 season to date

GET VACCINATED!

Go to http://dhmh.maryland.gov/swineflu/getVaccinated.html and find your local health department for more information.

MARYLAND RESIDENT INFLUENZA TRACKING SURVEY (MRITS)

During week 2, 613 (40.4% of total) participants in the MRITS responded to the weekly survey. Of those who responded, 20 (3.6%) reported flu-like illness, a proportion that has risen steadily for the past three weeks. This proportion is higher than this same week last season, when about 1.4% of respondents reported flu-like illness.

We are always looking for more participants for the MRITS. If you know someone who would like to participate, please direct them to our website: http://dhmh.maryland.gov/flusurvey.

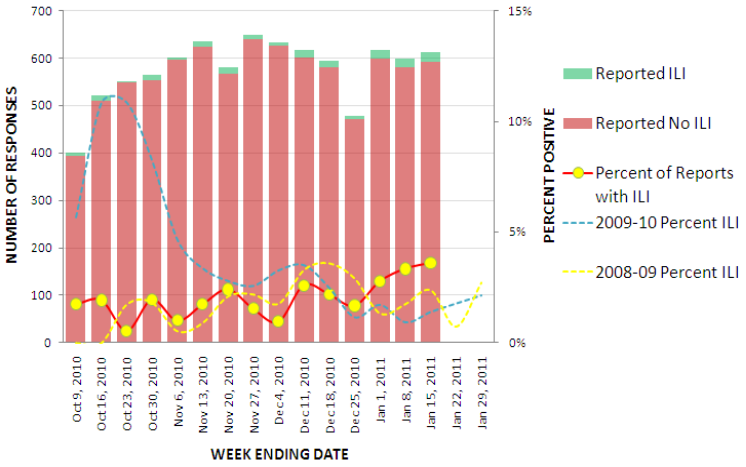


Figure 3. Number of responses and proportion reporting ILI to the MRITS by week, 2010-11 influenza season

DHMH LABORATORIES ADMINISTRATION REPORTS

During week 2, the DHMH Laboratories Administration performed a total of 25 PCR tests for influenza. Six were positive for influenza: 1 was type A (H1N1), 5 were type A (H3), and none were type B.

The table to the right shows the breakdown of positive tests by influenza strain for the 2010-11 influenza season to date.

More information on the valuable work done by the DHMH Laboratories Administration is available at http://dhmh.maryland.gov/labs.

Influenza Type	No. (%)
Type A	
H1	**53 (44.5%)**
H3	**58 (48.7%)**
Unsubtyped	**0 (0%)**
Type B	**8 (6.7%)**
TOTAL	**119 (100%)**

Table 1. Number of respiratory samples positive for influenza by PCR reported by the DHMH Labs Administration, 2010-11 influenza season

EIP INFLUENZA HOSPITALIZATION SURVEILLANCE

During week 2, 40 hospitalizations associated with influenza were reported to the Emerging Infections Program (EIP). To date, there have been 214.

To be a confirmed hospitalization associated with influenza, the person must be hospitalized and have a positive influenza test of any kind (rapid test, PCR, culture).

Last season, 12 hospitalizations were reported during week 2, with a total of 1,353 at that point in the season. For the entire season (2009-10), 1,400 hospitalizations were reported.

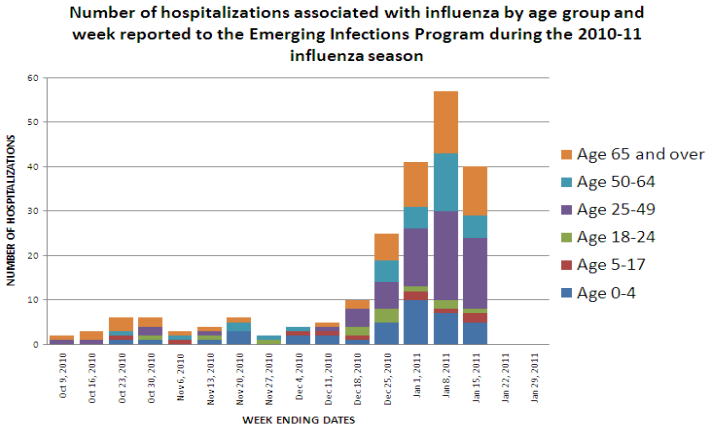


Figure 4. Number of hospitalizations associated with influenza, by age group and week, reported to the Emerging Infections Program, 2010-11 influenza season

DID YOU KNOW?

Influenza has an economic cost. A literature review published in Pharmacoeconomics (2008; 26(11): 911-24) found that people sick with the flu lost up to 5.9 days of work as a direct result of their illness. People also missed other daily activities when household members under their care became ill. There was also a survey of over 3,700 U.S. workers by CareerBuilder.com showing that 72% of those polled reported going to work while ill. Also, 53% of participants reported getting sick from a co-worker, and 12% said they got sick from using public transportation.

REPORTS OF OUTBREAKS IN INSTITUTIONAL SETTINGS

During week 2, three outbreaks of influenza, three outbreaks of ILI, and two outbreaks of pneumonia were reported. This brings the season's total to 16 reported outbreaks. Last season, a total of 208 outbreaks of respiratory illness were reported. Of those, 33 were confirmed as influenza outbreaks.

An outbreak of ILI is re-classified as an outbreak of influenza if there is laboratory evidence of influenza virus present in the samples collected from case-patients during the outbreak.

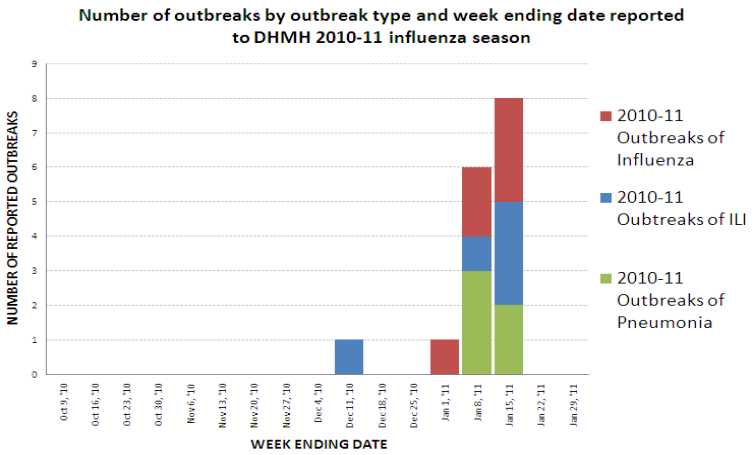


Figure 5. Number of outbreaks reported by week and by type during the 2010-11 influenza season.

EMERGENCY DEPARTMENT ILI REPORTS (ESSENCE)

During week 2, a total of 41,343 visits to emergency departments for all reasons were reported to the Office of Preparedness and Response through the ESSENCE system. Of those visits, 1,141 (2.8%) were for influenza-like illness. This proportion is slightly higher than those observed over the prior two influenza seasons.

For more information on ESSENCE, please visit the Office of Preparedness and Response's web site at: http://bioterrorism.dhmh.state.md.us.

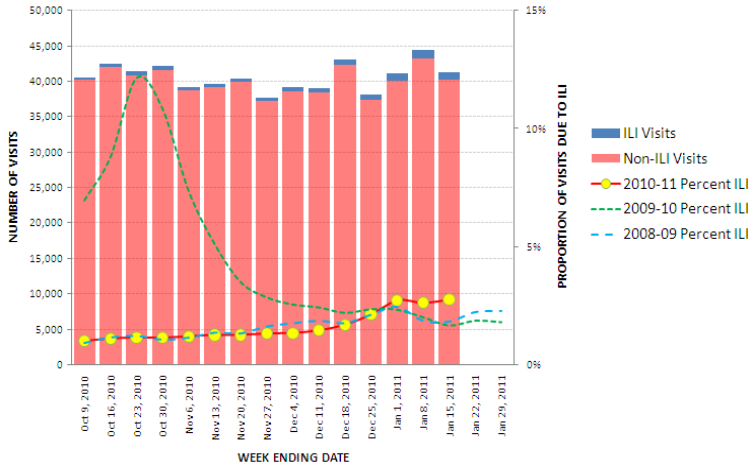


Figure 6. Number and proportion of visits to emergency departments for ILI by week reported through ESSENCE, 2010-11 influenza season.

GOOGLE FLU TRENDS

According to Google, influenza activity in Maryland is currently "**MODERATE**". What does this mean? From the Google Flu Trends Website: "We have found a close relationship between how many people search for flu-related topics and how many people actually have flu symptoms. Of course, not every person who searches for 'flu' is actually sick, but a pattern emerges when all the flu-related search queries are added together. We compared our query counts with traditional flu surveillance systems and found that many search queries tend to be popular exactly when flu season is happening. By counting how often we see these search queries, we can estimate how much flu is circulating in different countries and regions around the world."

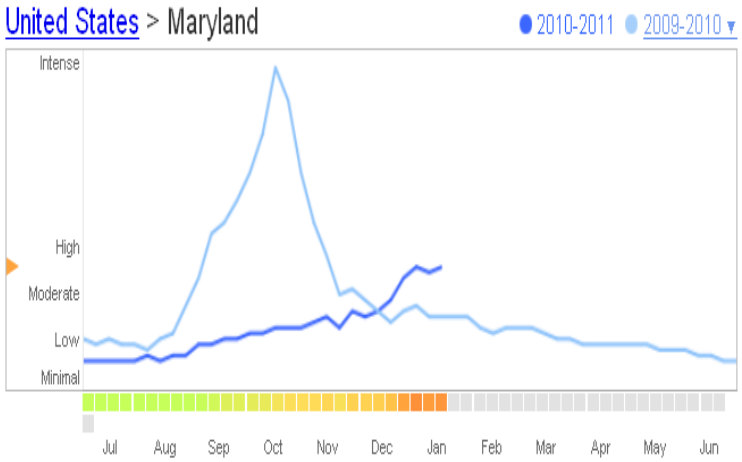


Figure 7 – According to Google Flu Trends, influenza activity in Maryland is currently "moderate". At this time last year, during the 2009 H1N1 influenza pandemic, influenza activity in Maryland was "low" to "moderate".

OFFICE OF INFECTIOUS DISEASE EPIDEMIOLOGY AND OUTBREAK RESPONSE

201 W. PRESTON ST.

BALTIMORE, MD 21201

PHONE: 401-767-6700

FAX: 410-669-4215

VISIT US ON THE WEB:

http://dhmh.maryland.gov

ALL THE INFORMATION INCLUDED IN THIS REPORT IS PROVISIONAL AND SUBJECT TO CHANGE AS MORE DATA ARE RECEIVED FROM SURVEILLANCE SOURCES.

THE INFORMATION INCLUDED IN THIS REPORT IS NOT INTENDED TO BE USED FOR INDIVIDUAL DIAGNOSES.

ONLINE VERSION OF THIS REPORT AND PAST SEASONS' REPORTS MAY BE DOWNLOADED AT:

http://dhmh.maryland.gov/fluwatch

FLU SURVEILLANCE IN NEIGHBORING STATES:

DELAWARE-

HTTP://BIT.LY/9Zkp3

DC-

http://tinyurl.com/yj7br9e

PENNSYLVANIA-

http://tinyurl.com/37323xn

VIRGINIA-

http://tinyurl.com/kmnaeu

WEST VIRGINIA-

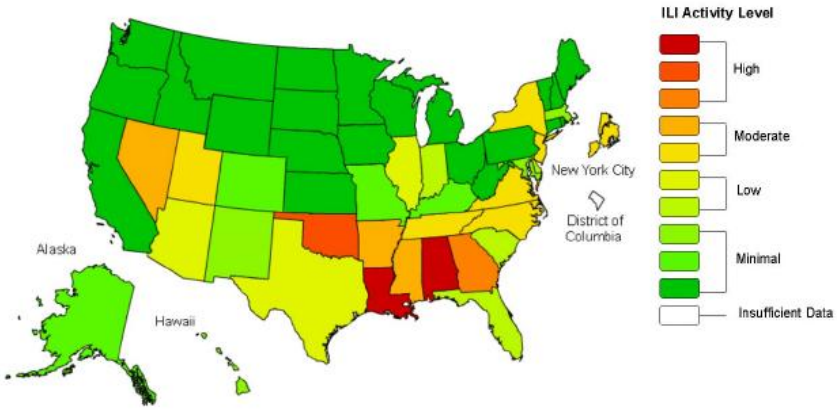
http://tinyurl.com/39m2kon

CDC NATIONAL INFLUENZA SURVEILLANCE REPORT (http://cdc.gov/flu/weekly)

During week 2 (January 9-15, 2011), influenza activity in the United States increased.

- Of the 4,983 specimens tested by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories and reported to CDC/Influenza Division, 1,288 (25.9%) were positive for influenza.
- The proportion of deaths attributed to pneumonia and influenza (P&I) was below the epidemic threshold.
- Two influenza-associated pediatric deaths were reported. One of these deaths was associated with an influenza A (H3) virus and one was associated with an influenza A virus for which the subtype was not determined.
- The proportion of outpatient visits for influenza-like illness (ILI) was 2.9%, which is above the national baseline of 2.5%. Three of the 10 regions (Regions 2, 4, and 5) reported ILI above region-specific baseline levels. Four states experienced high ILI activity, New York City and nine states experienced moderate ILI activity, seven states experienced low ILI activity, 30 states experienced minimal ILI activity, and data were insufficient from the District of Columbia.
- The geographic spread of influenza in 17 states was reported as widespread; 15 states reported regional influenza activity; the District of Columbia and 12 states reported local influenza activity, and Guam, Puerto Rico, the U.S. Virgin Islands, and six states reported sporadic influenza activity.

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILInet
2010-11 Influenza Season Week 2 ending Jan 15, 2011



Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*
Week ending January 15, 2011 - Week 2